

# NOTES ON THE ALEYRODIDAE OF JAPAN (HOMOPTERA) VIII

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## *Aleurocanthus cinnamomi* TAKAHASHI.

Trans. Nat. Hist. Soc. Formosa, XXI, p. 205 (1931); Dept. Agr., Res. Inst. Formosa, Rept. no. 59, p. 47 (1932).

Host.—*Machilus* sp.

Habitat.—Japan: Yamaguchi.

Many pupa cases were collected by Mr. K. Sasaki. Hitherto recorded from Formosa, where the species is common on the camphor tree and *Machilus*, sometimes attacking *Actinodaphne*.

Pupa case with some minute circular pores on the dorsum mesad of the submarginal spines, which pores were overlooked in preparing the original description. About 6 marginal teeth occupy a space of 0.092 mm.



Fig. 1.

*Aleurocanthus cinnamomi* TAKAHASHI.  
Fore wing.

Fore wings with 8 white areas, and with many minute teeth on the margin, the teeth wider than long, directed outwards, each with about 3 setae directed toward the wing apex.

This species is differentiated from *Aleurocan-*

*thus spiniferus* QUAINANCE by the presence of more dorsal spines and by the smaller marginal teeth of the pupa case.

## *Aleurotuberculatus piperis* TAKAHASHI.

Dept. Agr., Res. Inst. Formosa, Rept. no. 66, p. 52 (1935).

Host.—*Piper futoakusura*.

Habitat.—Japan: Atami, Izu.

Some pupa cases were taken by Mr. S. Kanda, March 28, 1939, which differ from the Formosan specimens in the yellow colour. New to Japan proper. Pupa case with a narrow marginal rim on the venter, which is more sclerotised and about 0.014 mm. wide.

*Dialeurodes euryae* n. sp.

(Pupa case) White, with no secretion evident. Elliptic, about 1.25 or 1.3 times as long as wide, broadest at the basal part of abdomen, not or scarcely constricted across the cephalothorax, thin, slightly indented at the hind end. Mid-thoracic suture very thin, faint, not reaching the margin; meso- and metanotum defined; suture between the thorax and abdomen short, nearly as long as the suture between the meso- and metanotum, reaching a little beyond the hind legs; abdominal segments distinct on the median area, a pair of narrow sclerotised parts present between the 7th and 8th segments. Dorsum with numerous very small papilla-like markings except on the marginal and middle areas, which markings are arranged in radiating rows; many short furrows running mesad from the margin as in

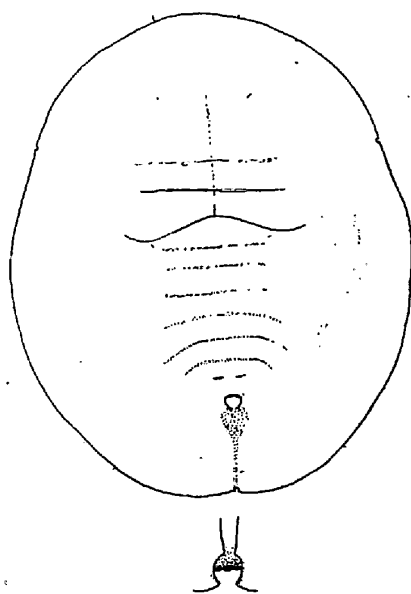


Fig. 2.

*Dialeurodes euryae* n. sp.  
Pupa case and hind end of  
caudal furrow.

*Dialeurodes citri* Ashm.; a pair of very small simple setae present on the cephalothorax, the basal abdominal segment, near the vasiform orifice, and near the hind end. Thoracic tracheal folds not distinct, without dots; thoracic tracheal pores small, widely opening, narrowly sclerotised on the mesal margin, with 2 small indistinct teeth, which are not discernible in some specimens. Caudal furrow very narrow, but much expanded on the basal two-fifths, not well defined laterally, with numerous very small granules in transverse rows; the expanded part much wider than the vasiform orifice; caudal pore wider than long, small, with 3 very shallow teeth on the

basal margin. Margin almost entire, with 2 pairs of short usual setae. Vasiiform orifice small, wider than long (excluding the margin), about one-fifth the space between the orifice and the hind end of pupa case, a little narrowed towards the hind margin, a little notched at the hind end, with some indistinct caudo-lateral teeth; the anterior marginal area moderately widened, defined from the 8th abdominal segment. Operculum occupying over two-thirds the orifice. Lingula concealed. Pupa case about 1.85 mm. long.

Host.—*Eurya glaberrima*.

Habitat.—Formosa: Noko, Taichu Prefecture.

Some pupa cases were collected by me, August 6, 1939. Related to *Dialeurodes monticola* TAKAHASHI, but much differs in the caudal furrow, which is very widely expanded on the basal part. Distinguished from *Dialeurodes formosensis* TAKAHASHI by the caudal furrow being longer and very narrow on the posterior part.

*Dialeurodes dioscoreae* TAKAHASHI.

Dept. Agr., Res. Inst. Formosa, Rept. No. 63, p. 43 (1934).

(Pupa case) Dorsum with some small circular translucent pores scattered, and some minute capitate setae in a single row as in *Dialeurodes tetrastigmae* TAKAHASHI, the setae about 30 in number in all. Caudal furrow with many rather large sculptures not arranged in rows. Thoracic tracheal folds without dots.

Host.—*Vitis* sp.?

Habitat.—Formosa: Sakahen, Karenko Prefecture.

Some specimens were collected by me, August 7, 1939, from which the above supplementary description has been prepared.

*Bemisia formosana* TAKAHASHI.

Dept. Agr., Res. Inst. Formosa, Rept. No. 60, p. 18 (1933).

Host.—A grass.

Habitat.—Formosa: Sharyoto, Kiirun.

Some pupa cases, which were pale yellowish green in life, were found by me on the beach, August 27, 1939. Previously known from the southern extremity of Formosa. The pupa cases have a pair of simple setae on the head and mesothorax, which are very variable in length.

*Aleurotrachelus alpinus* n. sp.

(Pupa case) In dried specimens, pale yellowish brown, paler on the marginal area, with no secretion. Subcircular, broadest about the middle, slightly narrower anteriorly, a little longer than wide, not or slightly pointed at the front end, thin, with no median ridge. Mid-thoracic suture nearly reaching the margin; pro- and mesonotum fused together; suture between the meso- and metanotum very prominent, straight, not reaching the longitudinal folds, far separated from the basal abdominal segment; suture between the thorax and abdomen nearly reaching the longitudinal folds; abdominal segments distinct on the median wide area, without rhachis, the median segmented area not defined laterally; the basal segment pointed at the middle of anterior margin, the 8th longer than the 7th, with a pair of transverse sclerotised parts on the anterior margin. Dorsum lacking long setae, with many long wavy linear markings running mesad from the margin, which are not distinct in some specimens; many rather large circular translucent pores over the dorsum, 4 of which are in a transverse row on the median area of each abdominal segment excepting the 6th segment; that has 5 pores on the median area; 3 pairs of minute setae present on the cephalothorax, a pair of similar ones on the basal abdominal segment and near the vasiform orifice. Longitudinal folds wavy, sclerotised, reaching the 2nd abdominal segment. Thoracic tracheal folds not reaching the longitudinal folds, without dots; the combs not differentiated from other marginal teeth. Outer marginal teeth longer than wide, rounded apically, narrowed towards the apex, variable in length, 14 of them occupy a space of about 0.092 mm.; inner teeth not distinct. Vasiform orifice rather large, rounded, nearly as long as wide (including the margin), not protruding, shorter than the space between the orifice and the hind end, with a shallow, very small and rounded tubercle at the hind end; the anterior marginal area not widened. Operculum occupying two-thirds the orifice. Pupa case 0.83 mm. long, 0.67 mm. wide, suture between meso- and metanotum about 0.23 mm., median segmented area of abdomen about 0.2 mm. wide, vasiform orifice including margin about 0.048 mm. wide.

Host.—*Rubus* sp.

Habitat.—Formosa: Shin Taiheizan (Hakurei), Taihoku Prefecture.

Some specimens were taken by me in September, 1938.

Closely allied to *Aleurotrachelus micheliae* TAKAHASHI, differing, however, in the vasiform orifice with a very small blunt median tubercle, the marginal teeth narrowed towards the apex, the absence of rhachis, and in other structures. Different from *Aleurotrachelus rubi* TAKAHASHI in the longer marginal teeth, the vasiform orifice not protuberant, the margin not indented, the absence of long dorsal setae, etc.; and from *Aleurotrachelus caeruleus* SINGH in the abdomen more widely segmented on the median area, without rhachis, the longitudinal folds being wavy, the vasiform orifice with a blunt median tubercle, etc.

At present 12 species of *Aleurotrachelus* are known in Japan including Formosa, which are differentiated as follows:

## (Pupa case)

- (1) Black .....(2)
- Pale .....(4)
- (2) Dorsum with numerous granules and long bristles .....  
..... *A. tuberculatus* SINGH.
- Dorsum without granules and long bristles .....(3)
- (3) Front margin indented at the middle, cephalothorax with a pair of small pale areas, longitudinal folds not distinct .....  
..... *A. pyracanthae* TAKAH.
- Not so. .... *A. camelliae* KUWANA.
- (4) Vasiform orifice with a median spine or tubercle at the hind end. ....(5)
- Vasiform orifice without a median spine or tubercle .....(7)
- (5) Median segmented area of abdomen very narrow, well defined laterally; basal abdominal segment prominently produced anteriorly, nearly reaching the mesonotum. .... *A. maesae* TAKAH.
- Not so. ....(6)
- (6) Longitudinal folds wavy, abdomen without rhachis, median tubercle of vasiform orifice rounded. .... *A. alpinus* n. sp.
- Longitudinal folds not wavy, abdomen with short rhachis, median tubercle of vasiform orifice pointed. .... *A. caeruleus* SINGH.
- (7) Marginal teeth very sharply pointed, very long. ....  
..... *A. fissistigmus* TAKAH.

- Marginal teeth not sharply pointed.....(8)  
 (8) Subcircular; outer margins of longitudinal folds sclerotised, with rounded tubercles; marginal teeth long, parallel-sided .....  
 ..... *A. micheliae* TAKAH.
- Elliptic; marginal teeth long, not parallel-sided .....(9)  
 (9) Marginal teeth longer than wide, more or less pointed apically.....  
 ..... *A. eliotsternae* TAKAH.
- Marginal teeth rounded apically. ....(10)  
 (10) Longitudinal folds with rounded shallow sclerotised tubercles on the outer margin.....  
 ..... *A. turpiniae* TAKAH.
- Longitudinal folds without tubercles. ....(11)  
 (11) Narrowed on the posterior part, bluntly pointed at the hind end; vasiform orifice as long as, or slightly longer than, wide .....  
 ..... *A. tsuwanus* TAKAH.
- Broadly rounded at the hind end, vasiform orifice wider than long.....  
 ..... *A. rubi* TAKAH.

*Setaleyrodes mirabilis* TAKAHASHI.

Jl. Soc. Trop. Agr. Formosa, III, no. 3, p. 222 (1931); Dept. Agr., Res. Inst. Formosa, Rept. no. 53, p. 46 (1932).

Host—*Stephanus japonicus*, attacking the leaf along the rib.

Habitat.—Formosa: Ritokukan near Rato, Taihoku Prefecture.

Many specimens collected by me, September 28, 1939, differ from the cotypes in the pupa case being white or pale yellow and smaller, and in the caudal furrow not distinctly reticulate just behind the vasiform orifice.

Previously known only from *Ficus*. The genus *Setaleyrodes* TAKAHASHI is now known from India and Formosa, and the present species is easily differentiated from the Indian *Setaleyrodes tschekeshii* SINGH by the caudal furrow with prominent polygonal sculptures. *Setaleyrodes quercicola* TAKAHASHI from Formosa is not a typical form of this group, being provided with many dorsal papillae and submarginal setae.

*Aleurolobus scolopiae* TAKAHASHI.

Dept. Agr., Res. Inst. Formosa, Rept. no. 60, p. 19 (1933).

Host.—*Scolopis olivacei*.

Habitat.—Formosa: Garanbi near Koshun.

In the type specimens, the thoracic tracheal combs are shrunk and not discernible, but in some pupa cases recently taken they are distinct, with 3 blunt teeth, the lateral 2 of which are almost confluent with the adjacent marginal teeth and obscured, but the median one is distinctly separated, nearly as long as wide and does not extend beyond the margin. The caudal comb almost similar to the thoracic ones.